CHA/FC 182÷524

AIRCOOLED LIQUID CHILLERS FREE-COOLING WITH AXIAL FANS, SCROLL COMPRESSORS AND SHELL AND TUBE EXCHANGERS.

FROM 52 kW TO 154 kW.

UNIT DESCRIPTION

The water coolers of the CHA/FC 182÷524 series offer innovative technology to meet the needs of systems for both domestic as well as industrial applications requiring the production of cooled water continuously year-round.
During the cold months, in the FREE COOLING operation mode, the return liquid of the system is cooled directly by forced convection of outdoor air through the condensation battery, thus saving energy by not operating the unit's Scroll compressors. A 3-way valve system controlled by the electronic microprocessor controller that manages the entire unit allows, based on the temperature of the outdoor air, operation in CHILLER or FREE COOLING mode. The product range includes 7 models composed of versions with tank, with pump or with tank and pump.

VERSIONS

CHA/FC
Cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater if needed.
- Axial fans directly coupled to a 3-phases electric motor with external rotor.
- Condenser made of FREE-COOLING copper tube and aluminium finned coil.
- Shell and tube type evaporator, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
HRT/P	Total heat recovery in parallel
SP	Inertial tank
PU	Single circulating pump
PD	Double circulating pump
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote display
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

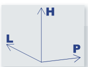
R407C

CHA/FC			182	202	262	302	364	404	524
Cooling	Cooling capacity (1)	kW	51,7	60,0	78,8	90,3	106,0	122,1	154,2
	Absorbed power (1)	kW	15,2	17,4	23,0	26,8	30,4	34,8	46,0
Free-cooling cycle	Air temperature (2)	°C	5,1	4,9	3,3	3,3	4,0	4,9	2,5
	Absorbed power (2)	kW	2,0	2,0	2,0	2,9	3,9	3,9	3,9
Compressors	Quantity	n°	2	2	2	2	4	4	4
	Type		<- - - - - - - - - - - -			Scroll			- - - - - - - - - - - ->
	Refrigerant circuits	n°	1	1	1	1	2	2	2
	Capacity steps	n°	2	2	2	2	4	4	4
Evaporator	Water flow	l/s	2,68	3,10	4,08	4,67	5,48	6,32	7,98
	Pressure drops	kPa	44	53	54	48	53	48	55
	Water connections	"G	2"½	2"½	2"½	PN16/DN 80	3"	3"	PN16/DN 100
Condenser	Fans	n°	2	2	2	3	4	4	4
	Air flow	m³/s	7,11	7,02	6,61	8,30	13,03	12,25	12,03
Electrical characteristics	Power supply	V/Ph/Hz	<- - - - - - - - - - - -			400 / 3 / 50			- - - - - - - - - - - ->
	Max. running current	A	43	47	57	69	87	95	115
	Max. inrush current	A	146	152	197	235	190	200	255
Unit with SPU accessory	Pump nominal power	kW	0,75	0,75	1,85	1,85	1,85	3,0	3,0
	Pump static pressure	kPa	111	84	114	113	103	198	145
	Storage water volume	l	190	190	470	470	660	660	660
	Expansion vessel	l	8	8	18	18	24	24	24
	Water connections	"G	2"	2"	2"	2"½	2"½	2"½	3"
Sound pressure (3)	STD	dB(A)	61	61	61	62	63	63	63
Weights	Transport weight (4)	Kg	1030	1100	1174	1258	1648	1718	1821
	Transport weight (5)	Kg	1159	1225	1382	1502	1973	2046	2165
	Operating weight (4)	Kg	1110	1180	1274	1368	1783	1868	1981
	Operating weight (5)	Kg	1419	1485	1932	2052	2733	2818	2938

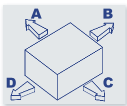
DIMENSIONS

CHA/FC			182	202	262	302	364	404	524
L	STD	mm	3550	3550	3550	3550	4700	4700	4700
P	STD	mm	1100	1100	1100	1100	1100	1100	1100
H	STD	mm	2220	2220	2220	2220	2220	2220	2220

DIMENSIONAL



CLEREANCE AREA



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A	mm	800
B	mm	1800
C (*)	mm	800
D	mm	1800

NOTES

(1) Chilled water (with ethilenic glycol at 30%) from 15° to 10°C, ambient air temperature 35°C.
(2) Ambient air temperature at wich the cooling capacity indicated in point (1) is reached.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) C SIDE: Electrical board side.